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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,584	10/08/2003	Marcos Kamezos	CPAC 1029-7	6868
22470	7590	08/04/2005	EXAMINER	
HAYNES BEFFEL & WOLFELD LLP			CHAMBLISS, ALONZO	
P O BOX 366			ART UNIT	
HALF MOON BAY, CA 94019			PAPER NUMBER	
			2814	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/681,584

Applicant(s)

KARNEZOS, MARCOS

Examiner

Alonzo Chambliss

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/29/05</u> | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The amendment filed on 6/23/05 has been fully considered and made of record in the instant application.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-11, 21, and 22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claims 21 and 22 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 21 and 22 both recite same structure of the multi-package module.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-11, 21, and 22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/681,734. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application and application 10/681,734 both recite an inverted second package (i.e. upper package) stacked on a first package (i.e. lower package).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 1-11, 21, and 22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/681,735. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application and application 10/681,735 both recite an inverted second package (i.e. upper package) stacked on a first package (i.e. lower package).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1-11, 21, and 22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/681,572. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application and application 10/681,572 both recite an inverted second package (i.e. upper package) stacked on a first package (i.e. lower package).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims 1-11, 21, and 22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/681,583. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application and application 10/681,583 both recite an inverted second package (i.e. upper package) stacked on a first package (i.e. lower package).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 1-11, 21, and 22 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,906,416. Although the conflicting claims are not identical, they are not patentably distinct from each other because instant application and the patent both recite an inverted second package (i.e. upper package) stacked on a first package (i.e. lower package).

***Allowable Subject Matter***

10. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowance subject matter: the prior art of record does not teach or suggest the combination of the second package substrate is a bump chip carrier type package substrate in claim 6.

The prior art made of record and not relied upon is cited primarily to show the process of the instant invention.

***Conclusion***

11. Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (571) 272-1927.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system see <http://pair-dkect.uspto.gov>. Should you

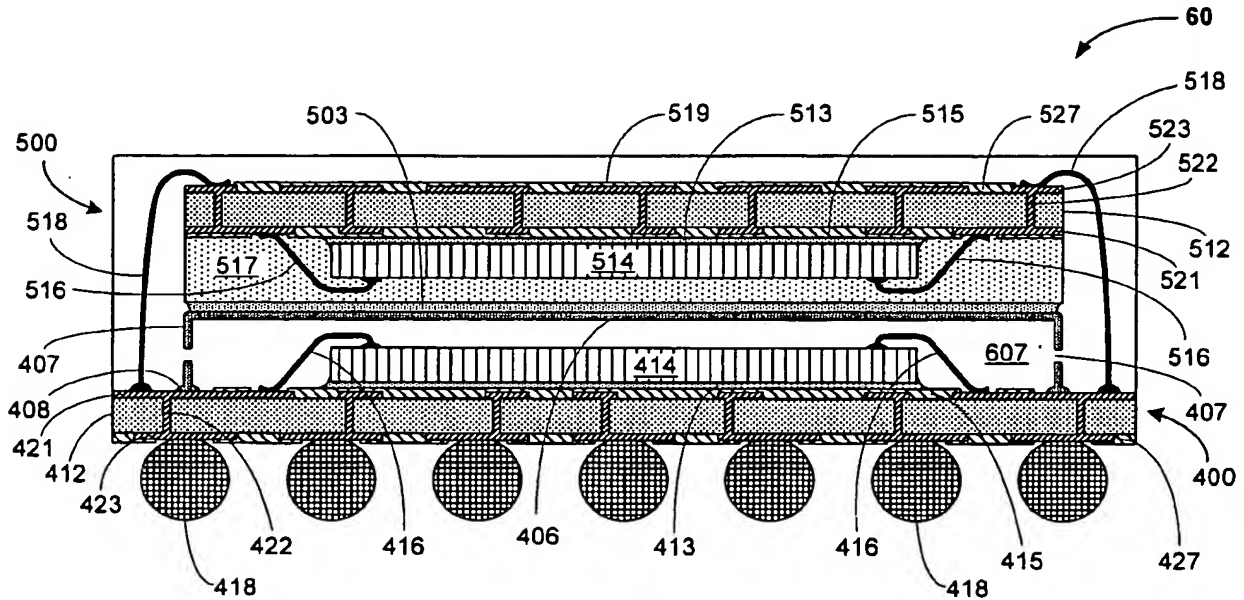
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have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or [EBC\\_Support@uspto.gov](mailto:EBC_Support@uspto.gov).

A handwritten signature in black ink, appearing to read "Alonzo Chambliss". The signature is fluid and cursive, with the first name "Alonzo" and last name "Chambliss" clearly distinguishable.

Alonzo Chambliss  
Primary Patent Examiner  
Art Unit 2814

AC/August 1, 2005



This diagram shows a cross-section of a complex layered assembly. At the base are six circular components labeled 406, each with a textured surface. Above them is a layer 407 containing internal structures 412, 418, 422, 423, 427, and 428. A central horizontal channel or cavity contains a series of vertical bars or segments labeled 414. Above this is another layer 516, which features curved side walls labeled 517 and 519. The topmost section consists of several layers: a patterned layer 513, a solid layer 515, and a thin top layer 519. Various other labels point to specific interfaces and structural details throughout the assembly.

**Fig. 6B**



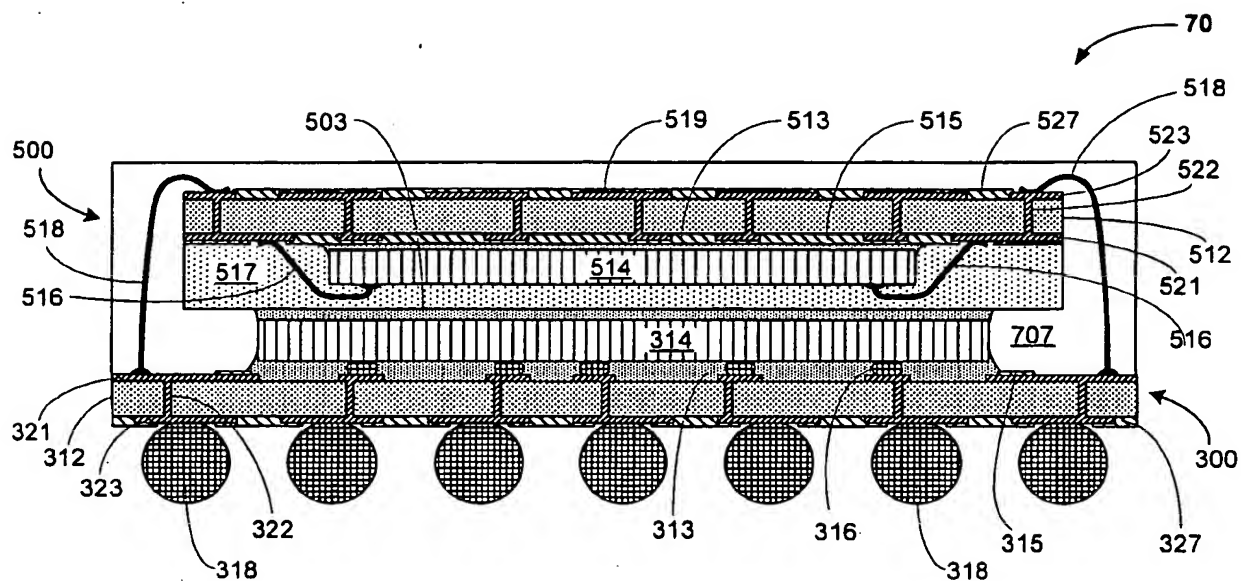


Fig. 7A

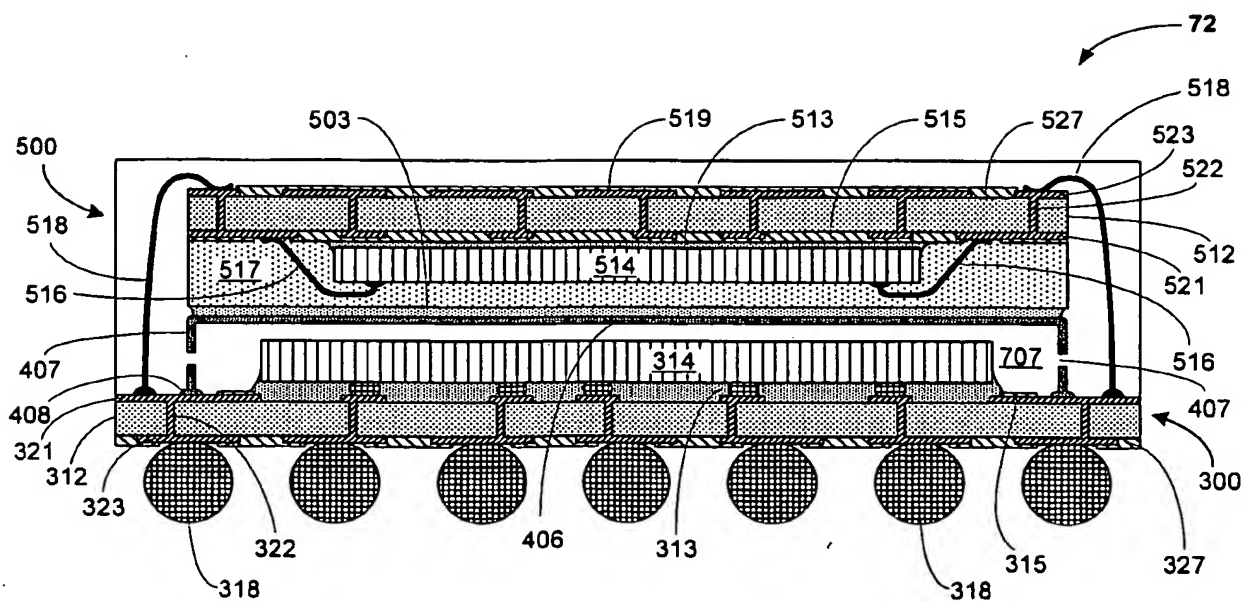
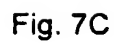


Fig. 7B



**Fig. 7C**

## Replacement Sheet

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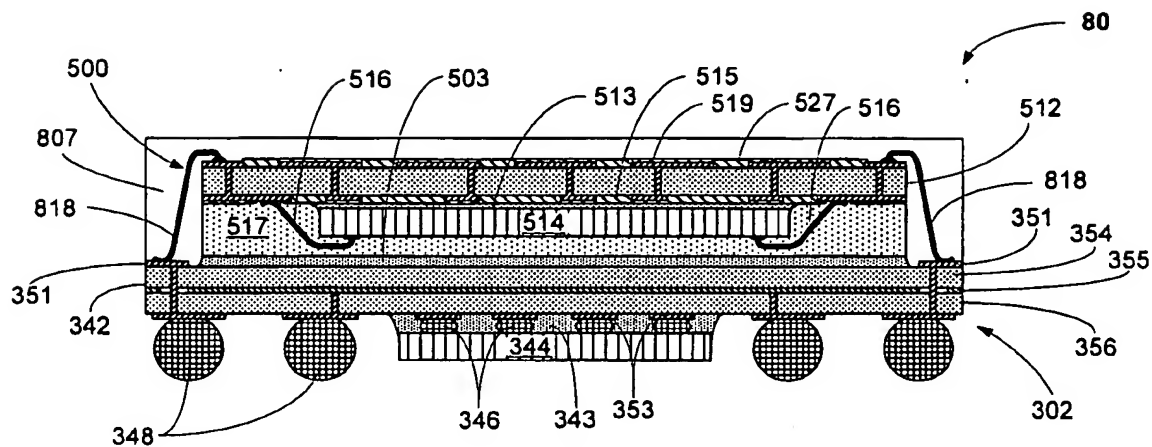


Fig. 8A

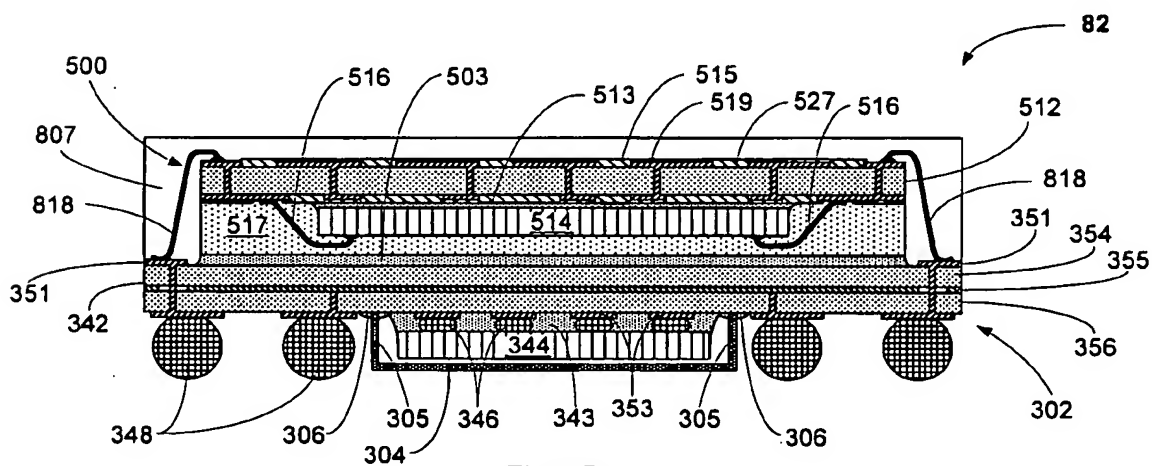


Fig. 8B

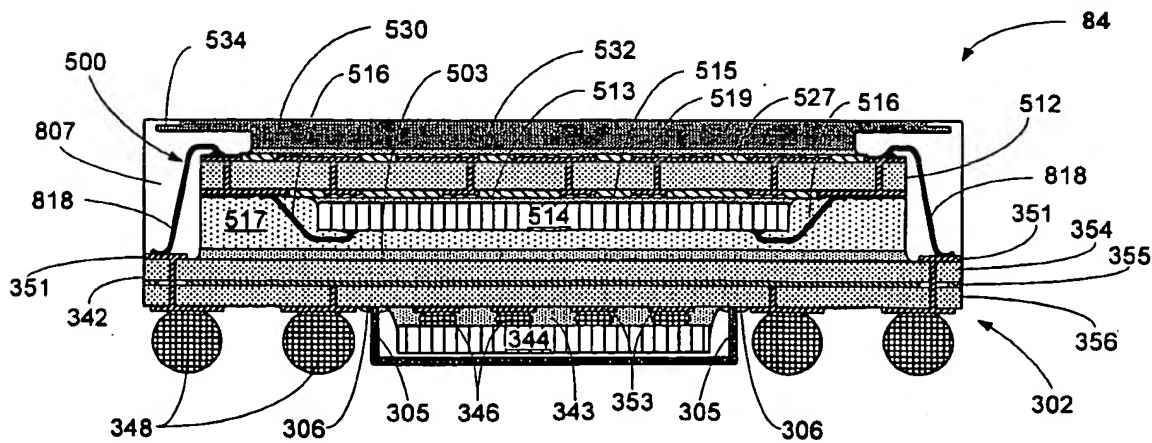


Fig. 8C